(No Model.)

J. C. BASEL & E. FRUEHAUF.

HOT BOX ALARM.

No. 483,682. Patented Oct. 4, 1892.

Fig. 1.

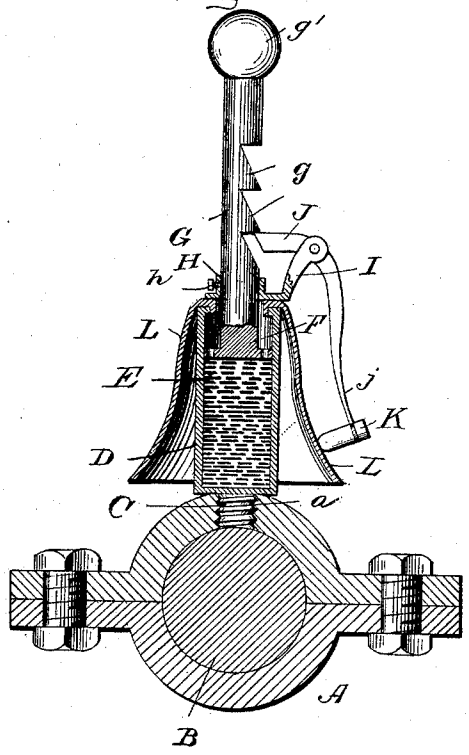


Fig. 2.

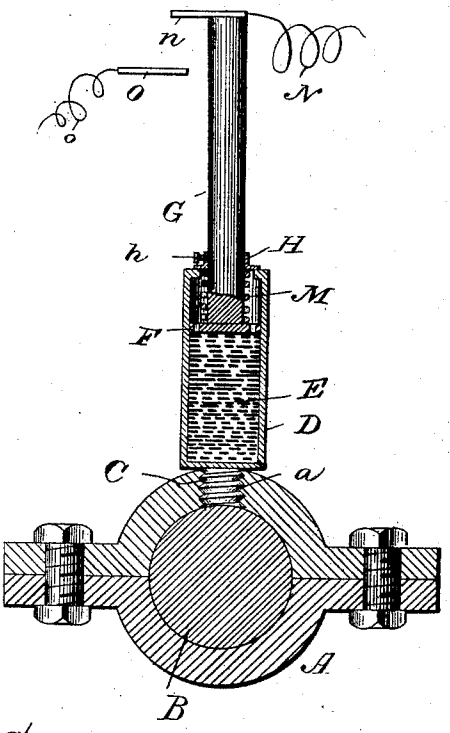
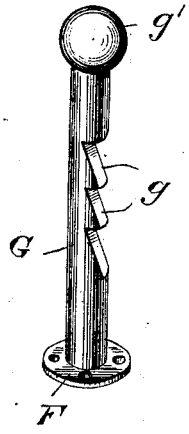


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN CONRAD BASEL AND EDUARD FRUEHAUF, OF GALVESTON, TEXAS.

HOT-BOX ALARM.

SPECIFICATION forming part of Letters Patent No. 483,682, dated October 4, 1892.

Application filed October 29, 1891. Serial No. 410,258. (No model.)

To all whom it may concern:

Be it known that we, JOHN CONRAD BASEL and EDUARD FRUEHAUF, citizens of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented a new and useful Hot-Box Alarm, of which the following is a specification.

This invention relates to alarms to indicate overheated journal-boxes; and it has for its object to provide a device of this character which will be simple in construction and effective in operation, and one which will be useful upon boxes of stationary engines, car-wheels, or for any style or form of machinery in which shafting or boxes are employed which are liable to get overheated.

With these and other objects in view the invention consists in the novel construction, arrangement, and combination of parts hereinafter more fully described, illustrated in the accompanying drawings, and specifically pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a vertical transverse section of an ordinary journal-box provided with an alarm attachment constructed in accordance with our invention. Fig. 2 is a similar view of a modification. Fig. 3 is a detail view of the plunger or piston.

Referring to the accompanying drawings, A represents a journal-box of ordinary construction and accommodating the axle or shaft B, and said journal-box is further provided upon its upper end with a threaded opening *a*, that is designed to receive the threaded stem C, screwing therein and supporting the hollow cylinder D thereon and upon said journal-box. Said cylinder D is designed to be partly filled with a suitable composition E, which is preferably a fatty substance which at ordinary temperatures is solid, but when raised to a certain degree beyond its ordinary temperatures, and in the present case to a point at which the journal-boxes are in an overheated condition, the same melts into a liquid form, and when the heated box has been cooled resolidifies and can be used over. This column of solidified matter supports the perforated head or piston F, carrying the stem or rod G, extending above the top of said cylinder and provided with a series of notches *g* upon one side thereof. Said stem or rod G works through the collar H, supported above the top of the cylinder and provided with a set-screw *h*, that is adapted to impinge upon said rod and hold the same, for the purposes to be presently described. Extending outwardly from said collar and extending upwardly therefrom is the bracket I, to the upper end of which is pivoted the pawl or dog J, normally engaging with one of the notches *g* in said piston-rod, and to which is connected or extends downwardly therefrom the striker-arm *j*, carrying at its extreme lower end the hammer K, that is designed at the proper moment to strike against the bell or gong L, secured to the top of said cylinder and inclosing the same above the journal-box upon which it is mounted. The extreme upper end of the piston-rod G may be weighted, as shown at *g'*, for the purpose of forcing the same down when the compound E has melted; but preferably for this purpose I employ the coiled spring M, interposed between the collar H and the head of the piston, as shown in Fig. 2; but the said spring is omitted when the piston-rod is weighted, as described and as illustrated in Fig. 1. It can be readily seen that as the matter contained within the supported cylinder melts from the transmission of heat thereto from the overheated journal-box the tension of the spring or the weighted end of the piston-rod will force the perforated plunger or head through the melted solid, and thus cause the pawl or dog J to be borne downward. The downward movement of the pawl releases the same from engagement with the notch engaged by the same, and while being forced downward the same elevates the hammer, which upon the releasement of the pawl falls down upon the gong or bell and sounds the alarm that indicates that the bearing is overheated. The gong or bell L may be dispensed with, for, as illustrated in the modification shown in Fig. 2, the upper end of the piston-rod may be placed in an electric circuit by the wire N, and instead of the pawl and notched face the same may be provided with a contact-arm *n*, that when the plunger has been forced downward through the melted compound comes in contact with the opposing contact-plate O in an electric circuit through the wire *o*, and thus closes the circuit which is in connection with

an electric bell of the ordinary type. In either case after the alarm has been given the plunger may be reset by elevating the same and holding it by means of the set-screw *h* until the compound has resolidified, when the plunger may be released and rested thereon the same as before the alarm was originally set.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a hot-box alarm, the combination, with a journal-box, of a cylinder supported upon said box and designed to accommodate a liquefying solid, a perforated plunger supported upon the solid within the cylinder and adapted to work through the solid when melted, and means for connecting said plunger with an alarm, substantially as set forth.

2. In a hot-box alarm, the combination, with a journal-box, of a cylinder supported upon said box and designed to accommodate a liquefying solid, a perforated plunger supported upon the solid within the cylinder and provided with a stem having a series of notches, a hammer-carrying pawl supported over said cylinder and engaging said notches, and a gong or bell suspended in the path of said hammer, substantially as set forth.

3. In a hot-box alarm, the combination, with a journal-box, of a cylinder supported upon said box and designed to accommodate a liquefying solid, a perforated plunger-head or piston supported upon said solid within the cylinder, a stem or rod connected with said head and provided with a series of notches upon one side thereof, a bracket supported upon the upper end of said cylinder, a pawl or dog carrying a hammer and pivoted to said bracket and normally engaging said notches, and a bell or gong supported upon said cylinder in the path of said hammer, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN CONRAD BASEL.
EDUARD FRUEHAUF.

Witnesses:
PHILIP ANDERSON,
TIM FINN.